

## TWO NEW ORIBATID MITES (ACARI: ORIBATIDA) FROM SAUDI ARABIA

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### **Synopsis**

BAYOUMI, B. M. and M. S. AL-KHALIFA (Zoology Department, College of Science, King Saud University, P.O. Box 2455, Riyadh 11451, Saudi Arabia) : Two new oribatid mites (Acari: Oribatida) from Saudi Arabia. *Acta arachnol.*, 35 : 15-21 (1986).

Two new oribatid mites, *Berlesezetes kingi* sp. n. and *Pilogalumna arabica* sp. n., are described from soil samples collected at Al-Qasim region, central zone of the Arabian Peninsula.

### **Introduction**

It seems likely that few taxonomic studies have been carried out on the oribatid fauna of Saudi Arabia. BAYOUMI & AL-KHALIFA (1984, 1985) described five new species and one new subspecies of oribatids from Asir, Gazan and Riyadh regions. A taxonomic list of different groups of mites and Collembola in Riyadh region was presented by AL-KHALIFA & BAYOUMI (1982).

This paper contains descriptions of two new oribatid mite species found in Al-Qasim region, central province of Saudi Arabia. Holotype and paratypes of each of the species described are deposited in the Department of Zoology, College of Science, King Saud University, Riyadh, Saudi Arabia.

### **Description of Species**

Family Microzetidae GRANDJEAN, 1936

Genus *Berlesezetes* BERLESE, 1913

***Berlesezetes kingi* sp. n.**

(Figs. 1-2)

*Measurements*:—Length of body: 240  $\mu\text{m}$ ; width: 170  $\mu\text{m}$ .

*Prodorsum*: Rostrum tripartite; rostral setae flagelliform, inserted on two lateral protuberances. Lamellae broad and separated far from each other. Cuspis of lamella oblique, with a pointed outer tip. Lamellar seta long, thick and provided with four long bristles on its inner edge, in addition to three longer bristles

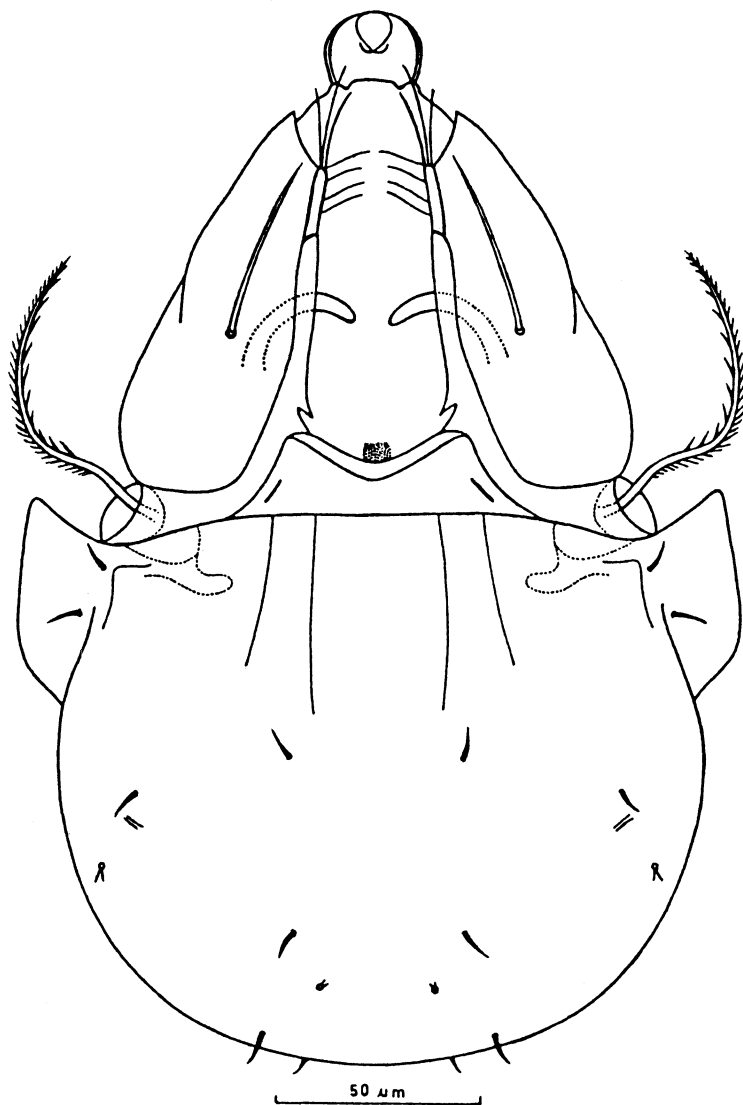


Fig. 1. *Berlesezetes kingi* sp. n., dorsal view.

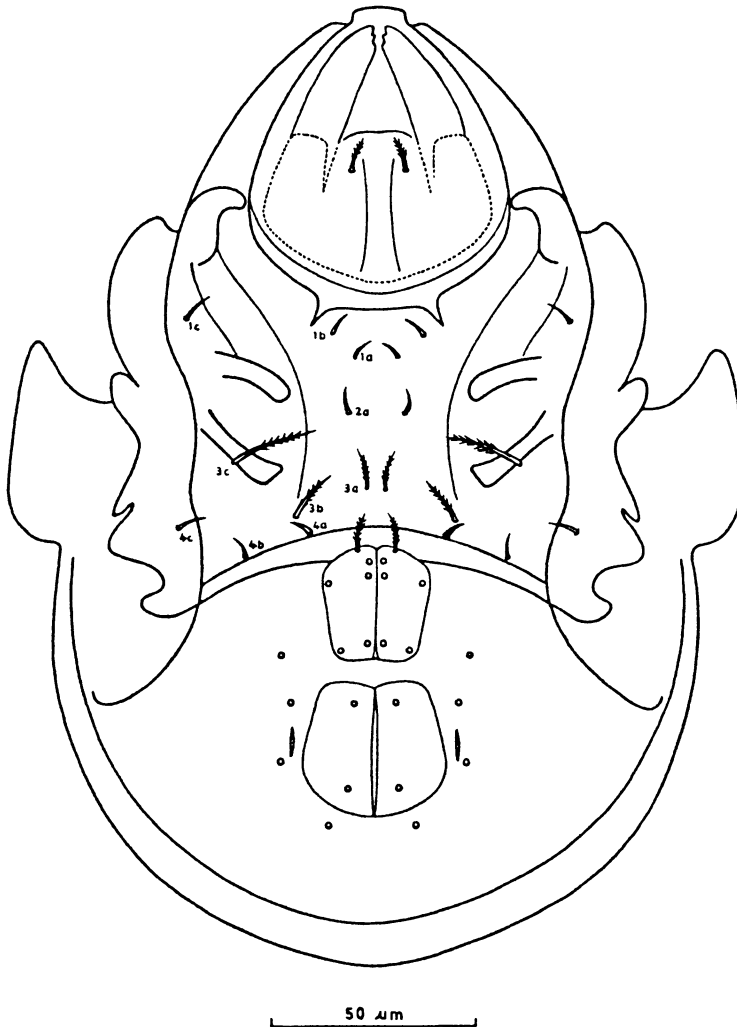


Fig. 2. *Berlesezetes kingi* sp. n., ventral view.

arising on its tip. A pair of hardly visible crescent-shaped lamellar apophyses arise medially from inner surfaces of lamellae. A thick interlamellar cuticular bridge is present connecting bases of lamellae. A pair of sharp teeth arise from lamellar base, at the origin of interlamellar bridge. Interlamellar setae long, smooth, originating on lamellae; their tips reaching lamellar cusps. Sensillus long, proclinate and ciliated.

*Notogaster*: Semi-circular in outline, with two pairs of fine longitudinal lines decurrent posteriorad from dorsosejugal suture. Nine pairs of short, smooth notogastral hairs are present; among them two pairs arise on pteromorphs.

*Coxisternal region*: Two pairs of fine longitudinal lines arising near lateral hypostomal bases and diverging posteriorad on coxisternal surface. Epimeral setal formula: 3-1-3-3. Epimeral setae 3a, 3b, and 3c are longer than the remainder, minutely barbed.

*Genito-anal region*: A thick transverse cuticular bridge limits the epimeral from the genito-anal region. Six genital, one aggenital, two anal and three adanal pairs of setae are present. All setae, except the most anterior pair of genital ones which is long and finely barbed, are represented by their alveoli.

*Legs*: All tarsi monodactyle.

*Material examined*: Holotype: Al-Qasim region, Al-Shinana Village; in litter of pine trees (*Tamarix* sp.), 6. XII. 1981. Two paratypes were collected with the holotype.

*Remarks*: This species appears to be closely related to *B. auxiliaris* GRANDJEAN, 1936. However, it can be separated from the latter by the following combination of characters:

1. Smaller number of bristles on lamellar setae.
2. Short lamellar apophyses not crossing each other.
3. The presence of a pair of sharp teeth at inner edge of lamellar base.

This species is dedicated to Prof. P. E. KING, Zoology Department, University College, Swansea, U. K.

Family Galumnidae JACOT, 1925

Genus *Pilogalumna* GRANDJEAN, 1956

***Pilogalumna arabica* sp. n.**

(Figs. 3-5)

*Measurements*:—Length of body: 702  $\mu$ m; width: 485  $\mu$ m.

*Prodorsum*: Rostrum rounded; rostral setae inserted on lateral margins, slightly barbed along its distal half. Lamellar setae approximately three times as long as rostral ones, slightly barbed and located laterally far from rostral setal insertions. Carinae *S* and *L* are absent. Interlamellar setae as long as lamellar ones, similarly slightly barbed. Dorsosejugal suture is absent. A pair of areae porosae dorsosejugal is situated posterior to interlamellar setal insertions.

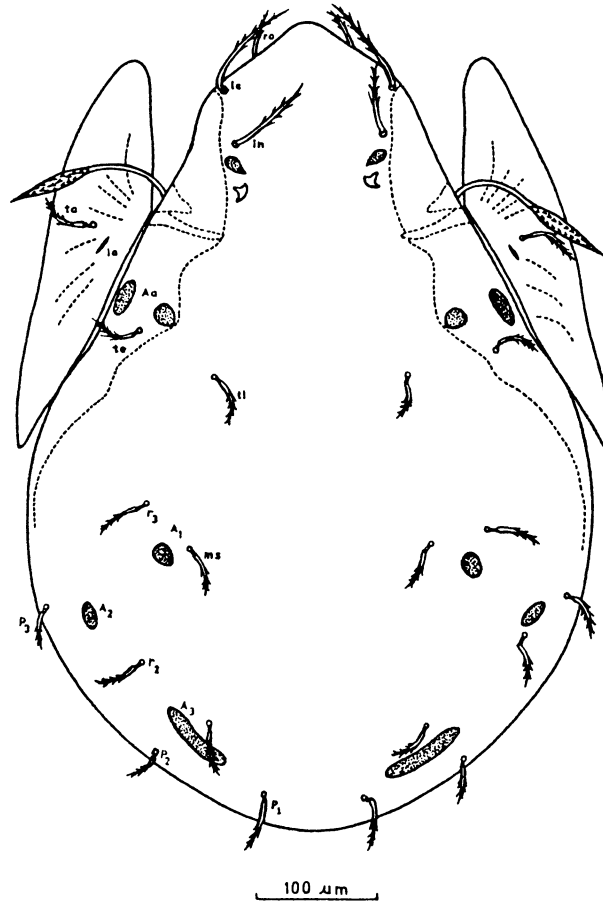


Fig. 3. *Pilogalumna arabica* sp. n., dorsal view.

Sensillus elongate, with a fusiform barbed head.

*Notogaster*: Pteromorphs show the usual galumnid form. Ten pairs of long and slightly barbed notogastral setae are present, among them a pair of setae situated on pteromorphs. All notogastral setae have prominent insertions; the setae displaced from their insertions and basally connected to them by a fine cuticular canal. Five pairs of areae porosae are present, area porosa *Aa* being divided each into an outer elongate one and an inner rounded one. Areae porosae *A<sub>1</sub>* and *A<sub>2</sub>* rounded and oval, respectively; *A<sub>3</sub>* elongate and larger than the remainder. Fissure *ia*, an oblique slit, located on pteromorpha. Fissures *ih*

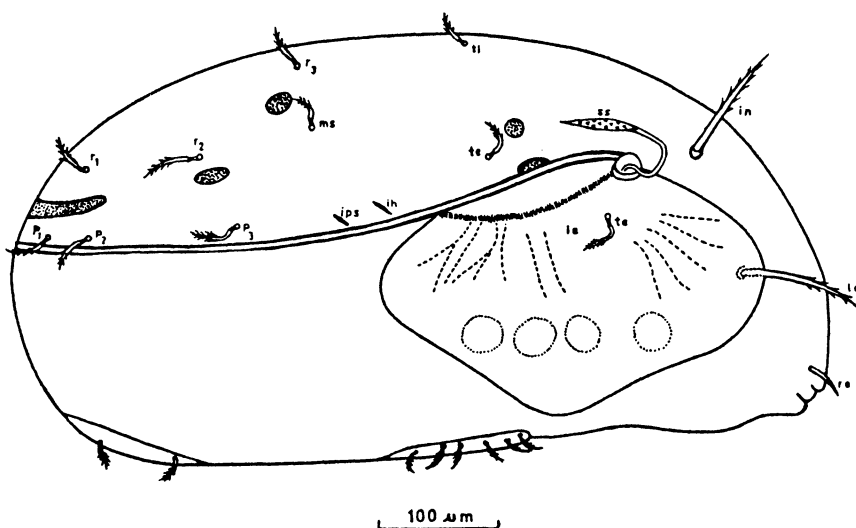


Fig. 4. *Pilogalumna arabica* sp. n., lateral view.

and *ips* not visible from the dorsal aspect, being situated close together at lateral notogastral margin.

*Ventral region:* Morphological characters of this region are typical for the genus. All ventral setae, except the genital ones, are slightly barbed.

*Legs:* All tarsi with three claws, heterodactylous with a strong median claw and a pair of weak laterals.

*Material examined:* Holotype: Al-Qasim region, Al-Shinana village, in soil under palm trees, 6.XII.1981. Two paratypes were collected from the same locality.

*Remarks:* On the basis of shape of area porosa  $A_3$ , it seems that the new species stands very near to the type-species, *P. ornatula* GRANDJEAN, 1956. It differs principally from the latter in having barbed notogastral setae and long interlamellar setae, which are as long as lamellar ones (they are about half as long as lamellar setae in *P. ornatula*).

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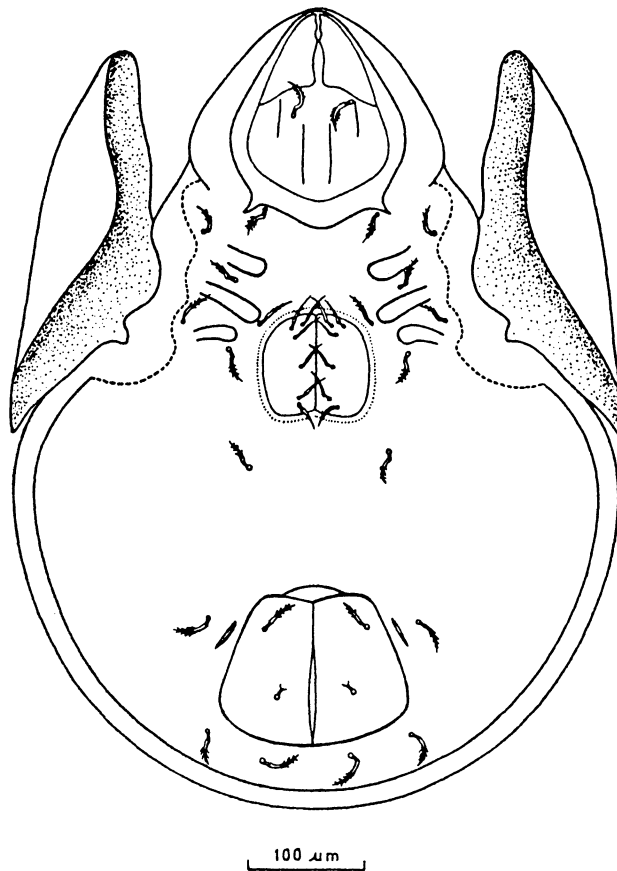


Fig. 5. *Pilogalumna arabica* sp. n., ventral view.

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